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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,879	07/10/2002	Martin Kessler	10191/2261	2929

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EXAMINER	
RO, BENTSU	

ART UNIT	PAPER NUMBER
2837	

DATE MAILED: 08/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/070,879	KESSLER ET AL.
	Examiner	Art Unit
	Bentsu Ro	2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 5 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 5 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

FIRST OFFICE ACTION

1. This application originally contains claims 1-4. These four claims have been canceled and substituted with claim 1 in the PCT application. In the preliminary amendment, applicant further canceled this PCT claim 1 and substituted with a new claim 2.

The new claim 2 has been renumbered as claim 5 because claim number must be consecutive. Throughout this prosecution, new claim number 5 will be used.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 5 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Park et al US Patent No. 4,347,464.

Claim 5 reads onto Park et al teaching as follows:

Claim 5:	**Park et al Fig. 1 teaching:**
An electronically commutatable motor comprising:	see Fig. 1 circuit;
a plurality of excitation windings having a common magnetic circuit;	Fig. 1 shows windings 7, 9, 11, 13; the windings 7-13 share a common stator laminated core because all windings are wound on the same stator core, thus, they have a common magnetic circuit; alternatively, a plurality of excitation windings could read onto windings 7 and 9; the windings 7 and 9 are bifilar windings, therefore, they have a common magnetic circuit;
a corresponding plurality of power semiconductor output stages,	the MOSFETs Q1-Q4;

the output stages including low-side-connected N-channel MOSFETs;	the MOSFETs Q1-Q4 are N-channel, see column 1, last two lines; the MOSFETs are connected at the ground side of the power source, therefore, they are low-side connected;
wherein each of the excitation windings is connected in a series circuit integrally with a respective one of the MOSFETs,	each of the MOSFETs Q1-Q4 is respectively connected serially with the windings 7, 9, 11, 13 as clearly shown in Fig. 1;
the excitation windings being connected to a common direct-current supply voltage,	the windings 7-13 are connected to +V dc supply voltage and the ground via the respective MOSFETs;
the excitation windings being energized successively in a commutation cycle	Fig. 2 shows the successive gating sequence of commutation cycle;
and being situated alternatingly in opposite directions into the series circuits with the MOSFETs,	see the dots on windings 7-13 and the current flow arrows; it is noted that for winding 7, the current flows away from the dot and for winding 9, the current flows toward the dot, thus, they are in opposite directions;
wherein, in the context of more than two excitation windings, the commutation cycle extends over an even number of successive, alternatingly oppositely polarized excitation windings, and	Fig. 1 clearly shows four excitation windings 7, 9, 11, 13, or two pairs 7, 9 and 11, 13; Fig. 2 shows the sequence of winding excitation, two on every instant of time;
wherein, in associated commutation phases, the MOSFETs are driven fully into a conductive state with uniform control signals; and	all MOSFETs Q1-Q4, when gated into conductive, are driven in a full conductive state; the control signals are uniform as can be seen from the distributor 43 or from Fig. 2;
a smoothing capacitor connected in parallel to the series circuits	Fig. 1 also shows snubber capacitors 19 and 33, each connected at least in part and in parallel with the winding/MOSFET series circuits;

for transferring back, in a countercurrent direction to the direct-current supply voltage,	when capacitor stores energy, the current must flow into the capacitor; when capacitor discharges energy, the current must flow away from the capacitor; thus, when the snubber capacitors 19, 33, discharge, the energy stored therein must discharge in a countercurrent direction to the dc supply voltage;
a disconnection energy transferred in a transformer fashion, upon disconnection of the excitation windings, to a respectively next energizable excitation winding.	for example, when winding 7 is disconnected (see Fig. 2, t=1), the inductive energy is then stored into snubber capacitor 19; when next winding 9 is energized (see t=2), the stored energy is discharged (or transferred) into the winding 9.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication should be directed to Bentsu Ro at telephone number 703 308-3656.

August 4, 2003

Bentsu Ro
Primary Examiner